Moving to the Circular Economy with Eco-Design & Open Innovation

Sustainability is an Essential Driver for Business:

Climate change, resource scarcity, water distress. Consumers and businesses have become more conscious of the need to improve sustainability and move away from the traditional models of the linear economy: take-make-use-dispose.
Most corporations have sustainable development goals and climate change targets in their strategy.
Yet it is challenging to find to develop new, sustainable products, services and business models.

Companies Adopt New Partner Ecosystems for the Circular Economy:

The circular economy demands different perspectives, fresh approaches and novel solutions.

Many companies are realizing they do not have all the necessary capabilities in house.

To meet the challenges of the circular economy companies are approaching innovation in a more agile way, developing new collaborations and managing new ecosystems of partners.

NineSigma: Extensive Experience of Eco-Design through Open Innovation

Eco-Design & Open Innovation can accelerate the adoption of innovative solutions while developing new products, services & infrastructures:

- Establishing holistic “Product Lifecycle Management” practices
- Defining new “Circular Model by Design”
- Finding alternative recyclable materials or materials minimizing the environmental footprint (e.g.: bio-sourced materials, etc.)
- Reducing energy and natural resources across the entire value chain (incl. Design, Engineering, Supply Chain, Recycling, etc.)
- Monitoring environmental footprint and taking continuous actions in the short, medium and long term.

"Ocean to Space": Sustainability Solutions for all Applications

(all cases presented below are publicly available on NineSights: https://ninesights.ninesigma.com)

Recycling in Space with NASA

For a mission lasting one year, a team of 4 astronauts generate approximately 2,500 kg of waste. NineSigma working for NASA found solutions that facilitate mission recycling, applicable to the volume and variety of waste products from space missions. Details.

Air Liquide Scientific Challenge:

Air Liquide used NineSigma's global innovation community to reduce greenhouse gasses, fight climate change and develop affordable, healthy and sustainable solutions to feed the projected population of ~10 billion people on the planet in 2050. Details here.

The Brine Challenge with K+S

Production of Potash (mainly KCl salt) comes with a substantial co-production of common salt tails (e.g. NaCl, KCl, MgCl2, insolubles). NineSigma identified technologies that enable K+S to reduce and eliminate brine run-off into surface and ground water. Details here.

Giving Poultry Waste a Second life with Al-Dabbagh Group (ADG)

On behalf of ADG, NineSigma is currently running a $1Million Grand Challenge, seeking environmentally friendly technologies for processing the increasing amounts of poultry farm waste such as manure. The call for proposals is open till 15.12.2020, details here.

Circular Materials Challenge with The Ellen McArthur Foundation

For this ambitious challenge NineSigma identified ways to make all plastic packaging recyclable. Stakeholders included Amcor, Ecover, Evian, L'Oréal, Mars, M&S, PepsiCo, The Coca-Cola Company, Unilever, Walmart and Werner & Mertz. 63 organizations from 23 Countries presented novel, circular material solutions.
In the Press: BBC, Reuters, La Tribune, Design Week , FastCompany
Details at NineSights

The Blue Economy Challenge

Aquaculture has great potential to contribute to food security, nutrition, livelihoods and economic growth. This AU$3 million challenge found innovators, entrepreneurs, designers, NGOs and academics who rethought in aquaculture to provide solutions that ensure sustainable development and environmental sustainability. Details here.

Identify Technologies and Partners for your Sustainability Initiatives

contact@ninesigma.com

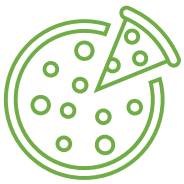
"Everyday Life": Sustainable Solutions for Our Daily Lives

Material Recovery Challenge with Nike

Through the Material Recovery Challenge, NineSigma identified innovations that substantially advanced the physical footwear recycling process for Nike. Winning team developed and proved new automated technology approaches to innovate the Nike Grind recovery process, link.

Recycling Technology for Mixed Plastic Waste

For Suntory Beverage & Food Limited, NineSigma pinpointed technologies for recycling mixed plastic waste into food packaging materials at a low cost, with guaranteed safety, link.



Plant-Based Alternatives for Mozzarella Cheese

NineSigma, on behalf of a multinational food and beverage corporation, found partners, technologies, and ingredients to realize a plant-based, non-dairy alternative for mozzarella cheese, link.

Next-Challenge: Smart Cities focused on accelerating connected, interactive and data driven solutions in advanced energy and mobility that address unmet needs in urban areas. This challenge delivered innovations to create safer and more efficient places for people to live and work – and had a lower impact on the environment, link.

Seeking Tools to Support Training and Compliance in Retail Facilities

NineSigma, on behalf of the Retail Industry Leaders Association (RILA) and the Retail Compliance Center, found proposals for mechanisms and approaches to support store level, employee training in environmental regulatory and compliance practices, link.

BMW Open Innovation Gallery on NineSights

NineSigma is working with BMW to help them shape the mobility of the future through hydrogen powered vehicles, electric vehicles, personal mobility and intelligent mobility aids. To know more, please follow the link

Hydrogen Storage System Capable of Operating at Low Pressure for Industrial Vehicles

Hydrogen is a fuel that produces no carbon dioxide when burned. Working for Toyota Industries Corporation, NineSigma found partners to develop a low pressure, hydrogen storage system for industrial trucks. Link.

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